NOT TO SCALE

HYDROLOGICAL PROCESSES (WITH EXAMPLE FLUXES)

- (1) PRECIPITATION = 2.4 GPM/ACRE BASED ON 23.64 INCHES/YEAR AVERAGE
 (2) EVAPOTRANSPIRATION = ESTIMATED TO BE 1.2 TO 1.7 GPM/ACRE OR 50 TO 70% OF TOTAL PRECIPITATION (COMBINED EVAPORTRANSPIRATION)
- (3) RUNOFF = ESTIMATED TO BE 0.24 TO 0.48 GPM/ACRE OR 10 TO 20% OF TOTAL PRECIPITATION
- (BASED ON SLOPES FROM 2-33%)
 (4) INFILTRATION = ESTIMATED TO BE 0.36 TO 0.72 GPM/ACRE OR 15 OR 30% OF TOTAL PRECIPITATION
- (5) SEEPAGE = ESTIMATED TO BE 0.32 TO 0.65 GPM/ACRE BASED ON ASSUMED 10X HIGHER KCOMPARED TO UNDERLYING UNIT
 (6) INFILTRATION TO ALLUVIUM = 0.04 TO 0.07 GPM/ACRE
- (7) INFILTRATION TO BEDROCK = 0.004 TO 0.007GPM/ACRE
- (RATES ESTIMATED BASED ON MODELING AND ASSUMPTIONS)

- GEOCHEMICAL/BIOLOGICAL PROCESSES
 (A) LEACHING OF SOLUBLE SELENIUM
- (B) OXIDATION OF SULFIDES
- (C) BIOLOGICAL REDUCTION OF SELENIUM AND ADSORPTION AND PRECIPITATION

WASTE ROCK DUMP LOCATIONS:
BALLARD - MWD080,MWD081,MWD083,MWD084,MWD082
HENRY - MWD087,MWD090,MWD086,MWD088,MWD085 ENOCH VALLEY - MWD092,MWD091

- WELL LOCATIONS

 * ALLUVIAL MMW010,MMW014,MMW012,MMW017,MW-15A,MW-16A

 ** WEATHERED DINWOODY- MMW007,MMW008,MMW013,MMW018
- *** DEEP DINWOODY MMW022

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IEV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED SIGNED	AND BY

P4 PRODUCTION SOUTHEAST IDAHO MINE-SPECIFIC SELENIUM PROGRAM

2007 HYDROGEOLOGIC DATA REPORT

CONCEPTUAL MODEL GENERIC EXTERNAL WASTE ROCK DUMP



Sheet 1 Of 1 Sheets

- HYDROLOGICAL PROCESSES
 (1) PRECIPITATION = 2.4 GPM/ACRE BASED ON 23.64 INCHES/YEAR AVERAGE
 (2) EVAPOTRANSPIRATION = ESTIMATED TO BE 1.2 TO 1.7 GPM/ACRE OR 50 TO 70% OF TOTAL PRECIPITATION (COMBINED EVAPORTRANSPIRATION)
- EVAPORTRANSPIRATION)

 (3) RUNOFF = ESTIMATED TO BE 0.24 TO 0.48 GPM/ACRE OR 10 TO 20% OF TOTAL PRECIPITATION(BASED ON SLOPES FROM 2-33%)

 (4) INFILTRATION = ESTIMATED TO BE 0.36 TO 0.72 GPM/ACRE OR 15 OR 30% OF TOTAL PRECIPITATION

 (5) INFILTRATION TO BEDROCK = 0.004 TO 0.007GPM/ACRE (GROUNDWATER IN PIT MAY BE PERCHED)

 (RATES ESTIMATED BASED ON MODELING AND ASSUMPTIONS)

GEOCHEMICAL/BIOLOGICAL PROCESSES (A) LEACHING OF SOLUBLE SELENIUM

- (B) OXIDATION OF SULFIDES
 (C) BIOLOGICAL REDUCTION OF SELENIUM AND ADSORPTION AND/OR PRECIPITATION

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CONCEPTUAL MODEL GENERIC BACKFILLED MINE PIT



Sheet ___1_Of__1_Sheets

GEOCHEMICAL/BIOLOGICAL PROCESSES

(A) LEACHING OF SOLUBLE SELENIUM AND OXIDATION OF SULFIDES
(B) BIOLOGICAL REDUCTION OF SELENIUM AND ADSORPTION AND PRECIPITATION

WELL LOCATIONS

* UPPER WELLS FM.- MMW023,MMW020

** DEEPER WELLS FM. - MMW021

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CONCEPTUAL MODEL GENERIC OPEN MINE PIT



Sheet ___1_Of__1_Sheets